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HIT Streamlines Nursing Home Operations

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An often overlooked segment when it comes to the implementation of electronic systems, long-term care facilities are beginning to see the value of moving away from paper.

Technology's role in nursing homes takes on greater importance as these types of facilities serve more older adults. As a result, many skilled nursing facilities (SNFs) and assisted living facilities are expanding their focus on the best ways to deploy technology to improve residents' quality of care.

The Office of the National Coordinator for Health Information Technology estimates that the healthcare system will save $140 billion per year if HIT is adopted. According to the 2007 report "Information Technology in Long Term Care [LTC]— State of the Industry," released by the American Health Care Association (AHCA) and the National Center for Assisted Living (NCAL), automation trends pervade clinical, financial planning, resident services, and facility areas.

One significant initiative, the LTC HIT Summit, comprised of leaders in the field, was initially mobilized in 2005 in the wake of former President George W. Bush's 2004 executive order concerning the development and implementation of interoperable HIT structure for healthcare quality improvement. Most recently, the LTC HIT Summit released "A Road Map for Health IT in Long Term Care 2008-2010," designed to update the original road map created in 2005 offering "guidance to provider organizations, legislators, regulators, vendors, payors, and other stakeholders."

The Latest Innovations

Majd Alwan, PhD, director of the Center for Aging Services Technologies (CAST) in Washington, D.C., and a member of the LTC HIT Summit, touts the trends and innovations in HIT for long-term care. These include handheld devices for care documentation by staff; easy-to-use touch screens with graphic icons for the documentation of assessment and care by direct care staff; hands-free, eyes-free voice documentation of assessment and care for certified nursing assistants; and software for electronic prescription processing from electronic physician order systems. Other technologies include managing medication passes to robotic medication dispensing, capturing quality data electronically for benchmarking and ongoing quality improvement, and operational and management information systems to assist in management functions.

Two of the latest innovations include electronic patient monitoring and e-prescribing devices. Some of the latest technologies include products from Vigil Health Solutions, Inc, which offers the Vigil Dementia System, featuring intelligent software and sensors to detect unexpected behavior, such as extended time out of bed, leaving a room, or incontinence. Another vendor, Healthsense, Inc, offers monitors for fall prevention, wireless call with location tracking, Wi-Fi coverage for staff communications using voice-over Internet protocol phones, and use of mobile devices necessary for EHR data entry.

“Standards for e-prescribing have recently been developed, so this isn’t an area of widespread adoption yet,” says Michelle Dougherty, MA, RHIA, CHP, the AHIMA’s director of practice leadership. “This is a complex undertaking for long-term care facilities because it requires standards to communicate between three parties: the facility, the pharmacy, and the physician.”

Dougherty says one solution currently gaining wider acceptance for streamlining tasks is nursing assistant documentation. “In the past, it was a paper-compliant process done at the end of a shift and wasn’t always the most accurate,” she says. “Facilities moving toward point-of-care systems—like kiosks or touch pads in the hallways near care delivery—for nursing assistants are seeing more accurate documentation that is impacting their reimbursement rates because it is reflecting what is actually being delivered.”

Erickson Retirement Communities is one example of success in this area. The privately held company headquartered in Baltimore currently has 23 campuses across the nation. More than 21,000 people live in Erickson communities and, according to the company, it employs more than 12,000 people.

Vice President of IT Daniel Wilt says the company has been successfully implementing electronic records management since 2005 in both its skilled nursing and assisted living settings. The company contracts with CareMEDX from HealthMEDX for nurses’ use of clinical notes, clinical assessments, orders, and electronic medication administration records. For nursing aides, the company has implemented electronic activities of daily living documentation. “We are in the process of implementing electronic lab and integration with our Doc EMR to allow for even better communication between the teams,” says Wilt.

Erickson also utilizes GE Healthcare’s Centricity for both nurse practitioners and physicians. “They write their notes in GE, and those are viewable via the CareMEDX portal,” he says. The company also has electronic labs for two of the skilled nursing and assisted living facilities where the data are electronic in GE Centricity and also viewable via the CareMEDX portal.

At Erickson, nurses and nurses’ aides use Dell Latitude laptops for documentation purposes. “The use of the same hardware provides more flexibility in the future for the users to do more than basic documentation,” Wilt says. It’s also been important for Erickson to work alongside its vendors for IT solutions. For instance, Erickson has worked closely with HealthMEDX to offer clinical insight into various workflows and processes to support software product development, all of which helps Erickson better streamline its efforts.

“The biggest improvements have been on the management side of the implementation,” Wilt says. “We have been able to provide greater insight into the amount and frequency of the documentation that we have not had before. We are able to monitor more efficiently the documentation process by providing reporting capabilities that are not feasible with paper.”

Another family of companies making strides with technology is Golden Living, LLC, based in Fort Smith, Ark. Golden Living provides care and services to older adults, along with rehabilitation therapy, hospice

care, home health, and temporary staffing services. Its facilities include 329 Golden LivingCenters (SNFs) and 17 Golden Living Communities (assisted living facilities) in 22 states.

John H. Derr, RPh, senior vice president and chief information officer, says the state of technology in skilled nursing settings has greatly improved over the last four years. “When PPS [prospective payment system] was put into play in 1999, most of the SNFs were using a regional accounting firm, and the CMS [Centers for Medicare & Medicaid Services] free application, called Raven, to do their MDSs [minimum data sets],” he explains. “Some tend to forget that SNFs only get paid if they send in their MDS via computer. With the expansion of Web technology and when Microsoft released its .NET technology, the capability of SNF clinical and financial IT systems grew in capability and installations. The large national chains like Golden Living developed their own custom applications over the years and most are now shifting to integrated off-the-shelf applications.”

Challenges to Success

Wilt admits that training presented one of the biggest challenges to HIT implementation. Erickson employees needed to develop proficiency in computer use, a process that began more than three years ago. “This is one of the more significant barriers to implementation. We spent a lot of time in training and support to make the communities successful,” he says.

Dan Cobb, president of HealthMEDX, agrees that nursing homes’ adoption of technology has been slow. He has examined studies from the AHCA and the California HealthCare Foundation. Responses to the December 2006 AHCA and National Center for Assisted Living study “A Snap-Shot of the Use of Health Information Technology in Long Term Care” indicated that 46% of long-term care facilities continued to do the majority of their work on paper or were just beginning to use computers. Only 1% reported being paperless, and only 2% considered themselves fully computerized and just beginning to communicate or communicating fully with outside healthcare providers.

However, Cobb has detected a shift toward a broader adoption of technology. “Even with low adoption,” he says, “I am beginning to see interest and commitment of nursing homes toward adopting electronic health record systems. I am also seeing providers looking to move data capture closer to the point of care via kiosk computers, portable computers on wheels, and portal wireless input devices. The MDS 3.0 (scheduled for publication this month) contains resident interview sections, which will add demand to point-of-care technology,” he says. “The MDS 3.0 is a major revision to the existing assessment instrument, MDS 2.0. The MDS 3.0 will create demand for point-of-care data capture, as many of the questions are now the result of resident interviews.”

The Importance of Standards

In terms of other challenges, the issue of standards creates concern. “The technology integration has been a challenge mostly because there are standards out there, but they give the implementers of them great flexibility in how to go about using them,” says Wilt. “We have been able to improve our monthly nursing summary we share between the nurses and doctors by providing an electronic exchange between our two clinical systems. This has improved access to information and hopefully influenced decision making properly.”

“The trends are to develop integrated systems in accordance with President Bush’s executive order about interoperability and interconnectivity of health information technology,” says Derr. “It is important that SNFs and other LTC provider settings interconnect through the HHS [Health and Human Services]-approved standard continuity of care document and other standards. So IT is important.”

Many nursing homes are adopting a wait-and-see approach until software products are certified by the Certification Commission for Healthcare Information Technology (CCHIT) using the Health Level Seven (HL7)-approved LTC EHR-S functional profile, says Eileen T. Doll, RN, BS, NHA, president of Efficiency Driven Healthcare Consulting, Inc in Baltimore.

Doll, who is a member of the AHCA’s Clinical Practice and Health Information Technology committees, says facilities are looking at their current vendors and possibly seeking out new vendors that are knowledgeable about IT standards and the certification process. They are seeing what other local hospitals and providers are doing to connect with each other.

Indeed, according to the previously mentioned AHCA report, many respondents indicate that they manage multiple vendors rather than selecting a single vendor to address their HIT needs. The report indicates that 47% of respondents take a best-of-breed approach with regard to IT vendor selection.

Cobb insists that proper integration of technology is essential. “True streamlining occurs when the clinical and administrative sides are fully integrated in all aspects—no duplicate entry, no data inconsistency, integrated processes,” he says. “Duplications are reduced or eliminated when common information is shared among care settings and information systems. Reduced duplication also improves accuracy, with less likelihood that the same piece of information is different in other systems.”

According to Alwan, one thing that helps with standardization is the LTC HIT Collaborative. CAST, the American Association of Homes and Services for the Aging, the NCAL, and the AHCA are partners in ensuring that the LTC sector is represented and the national HIT standards cater to the unique requirements of LTC applications.

Smaller Homes

How large must nursing homes be to make various technologies cost-effective? What can be done for smaller homes interested in technology but unable to invest as much as larger operations? “It really depends on the size of the facility, where they are in the process, whether they have the basic infrastructure in place or not, whether they are part of a chain or not, the management’s position, etc. Generally speaking, if shown a return-on-investment potential, including return in terms of quality and competitive advantage, providers should be willing to invest,” Alwan says.

Even so, smaller homes should not be discouraged, since Dougherty insists that size doesn’t matter. “The best approach is to have a plan and to take EHR implementation in stages,” she says. “Plan one application or module at a time based on the organization’s tolerance for change, leadership, and financial resources. If resources are limited, start with one or two smaller applications that will make an impact, such as the nursing assistant documentation/kiosk touchpad, and keep building.”

Another hurdle is that smaller nursing homes don't always have an IT department to "champion the issue and manage the process," says Dougherty. "Chains will have an advantage in this area, but rolling out an EHR and/or HIT becomes much more costly as you extrapolate over many facilities. Implementation requires rethinking current processes and roles; we need to see more experts and leaders to lead change."

Cobb explains that most companies price technology based on usage, so smaller providers pay less than larger providers. "Many smaller homes choose not to host and manage their software and data," he says. "With software as a service, even the smallest [nursing home] providers can benefit."

To date, cost has been a primary inhibitor. "We as an industry have not compiled and communicated enough quantitative ROI [return on investment] data," Cobb adds. "I believe that technology can improve the quality of care, reduce risk, save time, and grow the business. These data will continue to be made available and will definitively show providers that technology is good for business and good for resident care."

In the meantime, says Alwan, "Providers need to include the incorporation of IT and HIT in their strategic planning. They need to define where they want to be and how to get there, including defining phased IT projects with cost estimates." He points out that there are various federal- and state-level grant programs available that encourage deploying HIT. "In some cases, they need to partner with acute care providers in the region to meet eligibility criteria," he adds.

The Future of Technology

"I think that resident access to the electronic documentation will continue to be an area providers will eventually offer for their residents," says Wilt. "I think that technologies that connect the resident and family closer together will continue to be the most requested items."

Innovative technology enables residents and their families to access basic information such as lists of problems, medications, allergies, contact information, and lab reports. "The ability to make this seamless and easy to use for all will be the challenge," Wilt admits. "I see an opportunity with telehealth devices that are coming onto the market today for other uses that will eventually be extended to the SNF environments."

Alwan notes that a variety of exciting technologies are on the drawing board, including advanced total quality systems that integrate several basic components already in existence, such as nurse call, wandering management, fall prevention, resident tracking, resident assessment, electronic medication administration record, and electronic treatment administration record systems. Also in the works, according to Alwan, are advanced beds with embedded sensors of vital signs and sleep quality, and comprehensive interoperable EHRs that allow sharing health information securely across different settings.

Resistance to change presents one of the biggest challenges to technology integration in the nursing home environment, according to Cobb. "The industry has been manual and paper-based for so long, it requires a cultural shift to a technology base," he observes. "Education and communication are key to

overcoming this challenge." Cobb looks forward to seeing technology beyond EHR systems, such as telemedicine and telehealth, which are becoming more prevalent. "In the near future, you will see these devices integrated with EHRs," he says.

Derr agrees that telehealth is an emerging and important technology for the future. "We strive to have every clinical and financial data element required for the highest quality of health throughout the spectrum of LTC to be entered into a data repository only once at the right place, at the right time, accurate, and populate all other IT requirements," he says. "We are also upgrading all equipment used in SNFs as well as changing the homes to meet the cultural change required for a higher quality of life."

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